

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

Ex parte SANDRINE DECOSTER,  
VERONIQUE DOUIN,  
and  
VIRGINIE BAILLY

Appeal No. 2003-2140  
Application No. 09/692,716

ON BRIEF



Before LIEBERMAN, SCHEINER, and MILLS, Administrative Patent Judges.

LIEBERMAN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal under 35 U.S.C. § 134 from the decision of the examiner refusing to allow claims 1 through 104, which are all the claims pending in this application.

THE INVENTION

According to the appellants, the invention relates to a cosmetic composition comprising in a cosmetically acceptable medium at least one non-cellulose thickener and a

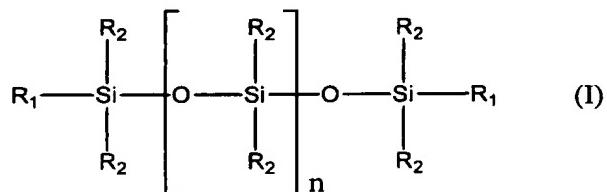
silicone copolymer having a specific formula and a range of dynamic viscosity. Additional limitations are described in the following illustrative claims.

### THE CLAIMS

Claims 1, 37, and 64 are illustrative of appellants' invention and are reproduced below.

1. A cosmetic composition comprising, in a cosmetically acceptable medium, at least one non-cellulose thickener and at least one aqueous emulsion comprising at least one silicone copolymer with a dynamic viscosity ranging from  $1 \times 10^6$  to  $100 \times 10^6$  cP, resulting from the addition reaction, in the presence of a catalyst, of:

- (a) at least one polysiloxane of formula (I):



in which:

-  $R_1$ , which may be identical or different, are independently chosen from groups that can react by chain addition reaction,

-  $R_2$  in formula (I), which may be identical or different, are independently chosen from alkyl, alkenyl, cycloalkyl, aryl, hydroxyl, and alkylaryl groups, optionally comprising at least one functional group

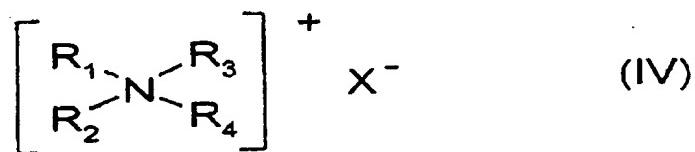
-  $n$  is an integer wherein said at least one polysiloxane of formula (I) has a kinematic viscosity ranging from 1 to  $1 \times 10^6$  mm<sup>2</sup>/s; and

-(b) at least one silicone compound comprising at least one and not more than two groups capable of reacting with the groups R<sub>1</sub> of said at least one polysiloxane (a), wherein:

-at least one of the compounds of type (a) and (b) comprises an aliphatic group comprising an ethylenic unsaturation.

37. A composition according to claim 1 further comprising at least one cationic surfactant chosen from:

A) quaternary ammonium salts of formula (IV) below:

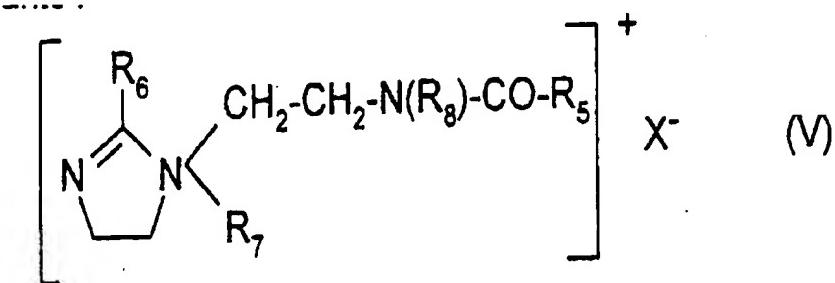


in which:

-the radicals R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, and R<sub>4</sub>, which may be identical or different, are independently chosen from linear and branched aliphatic radicals comprising from 1 to 30 carbon atoms, and aromatic radicals, wherein the aliphatic radicals optionally comprise hetero atoms, and

-X<sup>-</sup> is an anion chosen from the group of halides, phosphates, anions derived from organic acids, (C<sub>2</sub>-C<sub>6</sub>)alkyl sulfates, alkyl sulfonates, and alkylaryl sulfonates;

B) quaternary ammonium salts of imidazolinium of formula (V) below:



in which:

- $R_5$  is chosen from alkenyl and alkyl radicals comprising from 8 to 30 carbon atoms;

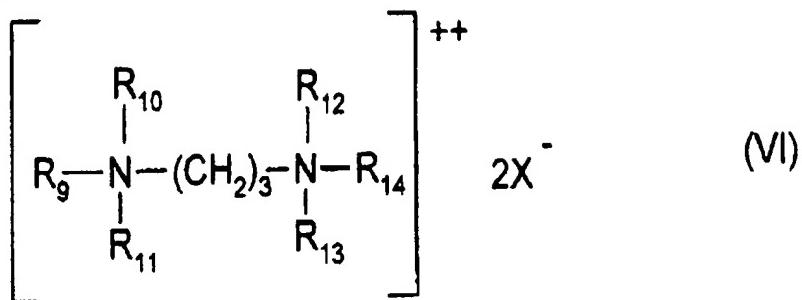
- $R_6$  is chosen from a hydrogen atom, C<sub>1</sub>-C<sub>4</sub> alkyl radicals, and alkenyl and alkyl radicals comprising from 8 to 30 carbon atoms,

- $R_7$  is chosen from C<sub>1</sub>-C<sub>4</sub> alkyl radicals,

- $R_8$  is chosen from a hydrogen atom and C<sub>1</sub>-C<sub>4</sub> alkyl radicals, and

- $X^-$  is an anion chosen from halides, phosphates, acetates, lactates, alkyl sulfates, alkyl sulfonates, and alkylaryl sulfonates;

C) diquaternary ammonium salts of formula (VI):



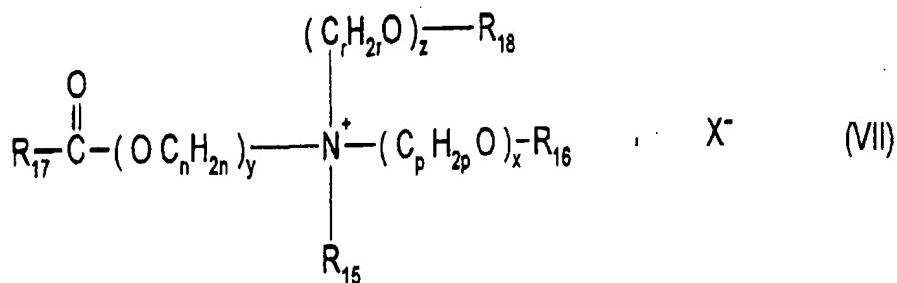
in which:

-R<sub>9</sub> is chosen from aliphatic radicals comprising from 16 to 30 carbon atoms,

-R<sub>10</sub>, R<sub>11</sub>, R<sub>12</sub>, R<sub>13</sub> and R<sub>14</sub>, which may be identical or different, are independently chosen from a hydrogen atom and alkyl radicals comprising from 1 to 4 carbon atoms, and

-X<sup>-</sup> is an anion chosen from halides, acetates, phosphates, nitrates and methyl sulfates;

D) quaternary ammonium salts of formula (VII) below comprising at least one ester function:



in which:

- $R_{15}$  is chosen from  $C_1$ - $C_6$  alkyl radicals and  $C_1$ - $C_6$  hydroxyalkyl and  $C_1$ - $C_6$  dihydroxyalkyl radicals;

- $R_{16}$  is chosen from:

-acyl groups of the following formula:



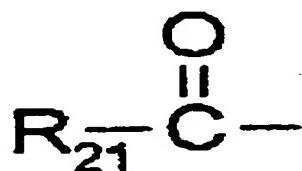
wherein  $R_{19}$  is defined below,

-linear and branched, saturated and unsaturated,  $C_1$ - $C_{22}$  hydrocarbon-based radicals, and

-a hydrogen atom;

- $R_{18}$  is chosen from:

-acyl groups of the following formula:



wherein  $R_{21}$  is defined below,

-linear and branched, saturated and unsaturated,  $C_1-C_6$  hydrocarbon-based radicals, and

-a hydrogen atom;

$-R_{17}$ ,  $R_{19}$  and  $R_{21}$ , which may be identical or different, are independently chosen from linear and branched, saturated and unsaturated,  $C_7-C_{21}$  hydrocarbon-based radicals;

- $n$ ,  $p$  and  $r$ , which may be identical or different, are independently integers ranging from 2 to 6;

- $y$  is an integer ranging from 1 to 10;

- $x$  and  $z$ , which may be identical or different, are independently integers ranging from 0 to 10; and

$-X^-$  is chosen from simple and complex, organic and inorganic anions; and

-provided that the sum  $x+y+z$  is from 1 to 15, and that when  $x$  is 0, then  $R_{16}$  is chosen from linear and branched, saturated and unsaturated,  $C_1-C_{22}$  hydrocarbon-based radicals, and that when  $z$  is 0, then  $R_{18}$  is chosen from linear and branched, saturated and unsaturated,  $C_1-C_6$  hydrocarbon-based radicals.

64. A composition according to claim 1 further comprising at least one surfactant chosen from anionic, nonionic, and amphoteric surfactants.

#### THE REFERENCES OF RECORD

As evidence of obviousness, the examiner relies upon the following references:

Quack et al. (Quack) 1980	4,237,243	Dec. 2,
Restle et al. (Restle) 2000	6,039,936	Mar. 21,
Decoster et al. (Decoster) 21, 2000	6,150,311	Nov.
Mougin et al. (Mougin)	6,166,093	

Dalle et al. (Dalle) EP 0 874 017 A2  
(published European Patent Office Application)

Oct. 28, 1998

Zviak, The Science of Hair Care, pp. 68-70 (Marcel Dekker, Inc. 1986).

### THE REJECTIONS

Claims 1 through 18, 21 and 101 through 104 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Dalle in view of Zviak.

Claims 1 through 20, 22, 24 and 101 through 104 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Dalle in view of Quack.

Claims 1 through 19, 22, 23, 25 through 36 and 101 through 104 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Dalle in view of Mougin.

Claims 37 through 63 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Dalle and Mougin in view of Restle.

Claims 64 through 100 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Dalle and Mougin in view of Decoster.

### OPINION

We have carefully considered all of the arguments advanced by the appellants and the examiner and agree with the examiner for the reasons stated in the Answer and the reasons herein that each of the rejections of claims 1 through 104 is well founded. Accordingly, we affirm each of the rejections.

As an initial matter, it is the appellants' position that, the claims are grouped into five groups corresponding to each of the rejections of record. Within each group the

claims "stand or fall together." See Brief, pages 4 and 5. Accordingly, separate consideration will be given to each of the rejections which are represented by claims 1, 37 and 64. See 37 CFR 1.192(c)(7)(2002).

The Rejections of claim 1

With respect to each of the rejections of record, the appellants are of the position that, "there is no clear and particular motivation to combine the teachings of the cited documents." See Brief, page 7. See similar language in the Brief, page 11, in the sentence bridging pages 12 and 13, pages 14, 16, 17 and 18. We disagree with the appellants' conclusion.

Dalle is directed to a silicone in water emulsion. See page 2, lines 3-5. We find that the emulsion of Dalle is useful for personal care applications including personal and facial cleansers, and hair shampoos. See page 5, lines 47-57. The emulsion may further be used in cosmetics including mascara. Id.

The emulsion of Dalle comprises a composition containing at least one polysiloxane and at least one organic silicon material that reacts with the polysiloxane by chain extension. See page 2, lines 30-34. We find that the polysiloxane is described in Formula I, page 3, lines 1-17 and is substantially the same as the formula of component (I) of the claimed subject matter. We find that R' may be a group required for the chain extension reaction and includes hydrogen, vinyl, allyl and hexenyl. See page 3, lines 12-13. We find that these are the same groups required by claims 2 and 3 of the claimed subject matter. We find that the second component that reacts with polysiloxane can

likewise be a polysiloxane. See page 3, lines 25-26. We find that the reaction occurs between a polysiloxane having one reactive group and a second polysiloxane having a second reactive group which reacts with the first polysiloxane. See page 3, lines 26-29. We further find that the silicone copolymer formed has the identical viscosity range of  $10^6$  to  $10^8$  mm<sup>2</sup>/sec required by the claimed subject matter. See Dalle page 5, lines 40-41 and claim 16.

Based upon the above findings, we conclude that the silicone copolymer of Dalle is the same as that of the claimed subject matter, there being no argument by the appellant that the copolymer of the claimed subject matter is different from that disclosed by Dalle.

A number of materials may be added to the emulsion either during the preparation of the emulsion or subsequent thereto. Dalle discloses that the additional material which may be present includes surfactants and thickeners. The surfactants which may be added include non-ionic, cationic, anionic alkylpolysaccharides and amphoteric surfactants. See page 4, lines 20-56, page 6, line 2 and claims 1 and 5 through 10. With respect to the composition disclosed by Dalle, it is our view that inasmuch as the claimed subject matter is directed to a composition, the sequence and time of addition of any given component is irrelevant to the issue of patentability. We further find that thickeners are generically disclosed. See page 4, line 58, and claim 12. Dalle however, is devoid of a teaching or disclosure of any specific thickeners.

The secondary references to Zviak, Quack and Mougin however, each disclose compositions within the scope of Dalle wherein conventional thickeners constitute one the

components. We find that Zviak teaches that in the formulation of shampoos, a thickener is a conventional component. See page 68. Classes of thickeners include six types disclosed on pages 69 and 70 only one of which falls within the scope of cellulose thickeners.

Quack likewise discloses the preparation of cosmetic composition including shampoos and cleansers. See column 12, lines 1-9, column 14, lines 21-40 and column 15, lines 2-12. Included in the composition are crosslinked polymers as viscosity increasing agents.<sup>1</sup> See column 3, line 8 to column 5, line 3 and column 7, lines 27-38. Furthermore, we find that these polymers may be combined with other thickeners. See column 7, line 38.

Mougin is likewise directed to cosmetic compositions including hair care products and makeup such as mascara. See column 1, lines 7-9 and 26-30. We find that the hair care products include shampoos. See Example 12. We find that the composition of Mougin likewise may contain thickeners. See column 15, lines 39-41. We find that the thickeners disclosed include seven classes of thickening agents only one of which is a cellulose derivative. See column 16, lines 9-35.

Based upon the above evidentiary findings, we conclude that it would have been obvious to one of ordinary skill in the art to have added at least one non-cellulose

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<sup>1</sup>The term "thicken," or vb "thickening," or "thickened" is defined, "to make thick, dense or viscous in consistency. See Webster's Ninth New Collegiate Dictionary, p. 225 (Merriam-Webster, Inc., Springfield, MA 1986). Therefore a thickener is a viscosity increasing agent.

thickener to the composition of Dalle based upon the disclosure of Dalle and any of the references to Zviak, Quack, or Mougin. Accordingly, we affirm each of the rejections over Dalle in view of Zviak, Quack, or Mougin.

The Rejection of Claims 37-63

Claim 37 additionally requires the presence of a cationic surfactant selected from four groups of cationic surfactants. It is the appellants' position with respect to the rejection of the claimed subject matter over Dalle in view of Mougin and Restle, "MOUGIN does not teach or suggest Appellants' viscosity range, let alone any viscosity range." See Brief, page 19. Furthermore the appellants assert that "one of ordinary skill in the art with DALLE before her would not think it prudent to incorporate the cationic surfactants of RESTLE for fear of the drawbacks explicitly disclosed in DALLE." See Brief, pages 19 and 20. We disagree with both arguments.

As to the issue of viscosity, we found supra that Dalle discloses the same silicone copolymer as required by the claimed subject matter, the silicone copolymer having the same viscosity range as required by claim 1. In contrast, Mougin was relied upon by the examiner to show the conventionality of the various thickeners that may be added to cosmetics or shampoos. The viscosity of the present in the composition of Mougin is not in issue, particularly as the only viscosity required by the claimed subject matter is that of the silicone copolymer formed from the reaction of the two components. That viscosity range is explicitly disclosed and taught by the primary reference to Dalle.

As to appellants' assertion that the addition of the cationic surfactants of Restle would not be prudent, we find that the utilization of cationic surfactants are explicitly taught and disclosed by Dalle. See page 4, lines 23-37. Dalle specifically discloses that, "[e]xamples of cationic surfactants include quaternary ammonium hydroxides such as tetramethylammonium hydroxide, octyltrimethylammonium hydroxide, dodecyl-trimethyl ammonium hydroxide, hexadecyltrimethyl ammonium hydroxide, octyldimethylbenzylammonium hydroxide, decyldimethylbenzyl ammonium hydroxide, didodecyldimethyl ammonium hydroxide, dioctadecyl dimethylammonium hydroxide, tallow trimethylammonium hydroxide and cocotrimethylammonium hydroxide as well as corresponding salts of these materials." Emphasis ours. See page 4, lines 26-30. We find that the same cationic surfactants in the form of salts are disclosed by Restle at column 3, lines 9-22. We find that the quaternary ammonium salt of claim 37, quaternary ammonium salt A), is likewise directed to a salt of a quaternary ammonium hydroxide wherein the definitions of each of radicals R<sub>1</sub> through R<sub>4</sub> are explicitly met by the above disclosure in both Dalle and Restle. As required by the claimed subject matter of claim 37, each of the radicals are aliphatic radicals having 1 to 30 carbon atoms. The sole distinction between the cationic surfactants disclosed by Dalle and those required by the claimed subject matter in 37A) is that the latter utilize anions other than the hydroxide specifically disclosed by Dalle. Inasmuch, as Restle has explicitly included the corresponding salts in place of the hydroxide of Dalle and these salts form the cationic

surfactants of the claimed subject matter, it would have been obvious to the person having ordinary skill in the art to have utilized the specific cationic surfactant salts required by the claimed subject matter.

Based upon the above findings, we sustain the rejection of claims 37 through 63.

The Rejection of Claims 64-100

We likewise sustain the rejection of claims 64 through 100. Claim 64 representative of this group of claims requires only the addition of a surfactant chosen from anionic, nonionic, and amphoteric surfactants. Inasmuch as we previously found that Dalle taught and disclosed the addition of each of these surfactants, no further inquiry is needed with respect to the teachings of Decoster. As a matter of record, however, we find that Decoster is directed to a cosmetic hair care product such as shampoos which contain each of the classes of surfactants required by the claimed subject matter. See column 1, lines 3-18 and column 2, line 29 to column 4, line 50. We conclude that their utilization in the invention of Dalle is a matter within the skill of the art. Accordingly, we sustain the rejection of the examiner.

DECISION

The rejection of claims 1 through 18, 21 and 101 through 104 under 35 U.S.C. § 103(a) as being unpatentable over Dalle in view of Zviak is affirmed.

The rejection of claims 1 through 20, 22, 24 and 101 through 104 under 35 U.S.C. § 103(a) as being unpatentable over Dalle in view of Quack is affirmed.

The rejection of claims 1 through 19, 22, 23, 25 through 36 and 101 through 104 under 35 U.S.C. §103(a) as being unpatentable over Dalle in view of Mougin is affirmed.

The rejection of claims 37 through 63 under 35 U.S.C. §103(a) as being unpatentable over Dalle and Mougin in view of Restle is affirmed.

The rejection of claims 64 through 100 under 35 U.S.C. §103(a) as being unpatentable over Dalle and Mougin in view of Decoster is affirmed.

The decision of the examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

  
PAUL LIEBERMAN  
Administrative Patent Judge

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BOARD OF PATENT  
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AND  
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